

<b>TRANSMITTAL LETTER TO THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US) CONCERNING A SUBMISSION UNDER 35 U.S.C. 371</b>		ATTORNEY'S DOCKET NUMBER <b>421/67 PCT/US</b>
		U.S. APPLICATION NO. (If known, see 37 CFR 1.5) <b>10/520341</b>
INTERNATIONAL APPLICATION NO. <b>PCT/US03/21094</b>	INTERNATIONAL FILING DATE <b>07 July 2003 (7.07.2003)</b>	PRIORITY DATE CLAIMED <b>05 July 2002 (5.07.2002)</b>
TITLE OF INVENTION PURIFIED AND ISOLATED HEPARAN SULFATE 3-O-SULFOTRANSFERASE ISOFORM 5 NUCLEIC ACIDS AND POLYPEPTIDES AND THERAPEUTIC AND SCREENING METHODS USING SAME		
APPLICANT(S) FOR DO/EO/US University of North Carolina at Chapel Hill, et al.		
Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:		
<p>1. <input checked="" type="checkbox"/> This is a <b>FIRST</b> submission of items concerning a submission under 35 U.S.C. 371.</p> <p>2. <input type="checkbox"/> This is a <b>SECOND</b> or <b>SUBSEQUENT</b> submission of items concerning a submission under 35 U.S.C. 371.</p> <p>3. <input type="checkbox"/> This is an express request to begin national examination procedures (35 U.S.C. 371(f)). The submission must include items (5), (6), (9) and (21) indicated below.</p> <p>4. <input checked="" type="checkbox"/> The US has been elected (Article 31).</p> <p>5. <input checked="" type="checkbox"/> A copy of the International Application as filed (35 U.S.C. 371(c)(2))</p> <p>a. <input type="checkbox"/> is attached hereto (required only if not communicated by the International Bureau).</p> <p>b. <input type="checkbox"/> has been communicated by the International Bureau.</p> <p>c. <input checked="" type="checkbox"/> is not required, as the application was filed in the United States Receiving Office (RO/US).</p> <p>6. <input type="checkbox"/> An English language translation of the International Application as filed (35 U.S.C. 371(c)(2)).</p> <p>a. <input type="checkbox"/> is attached hereto.</p> <p>b. <input type="checkbox"/> has been previously submitted under 35 U.S.C. 154(d)(4).</p> <p>7. <input checked="" type="checkbox"/> Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371(c)(3))</p> <p>a. <input type="checkbox"/> are attached hereto (required only if not communicated by the International Bureau).</p> <p>b. <input type="checkbox"/> have been communicated by the International Bureau.</p> <p>c. <input checked="" type="checkbox"/> have not been made; however, the time limit for making such amendments has NOT expired.</p> <p>d. <input type="checkbox"/> have not been made and will not be made.</p> <p>8. <input type="checkbox"/> An English language translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)).</p> <p>9. <input checked="" type="checkbox"/> An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4)).</p> <p>10. <input type="checkbox"/> An English language translation of the annexes of the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371(c)(5)).</p> <p><b>Items 11 to 20 below concern document(s) or information included:</b></p> <p>11. <input type="checkbox"/> An Information Disclosure Statement under 37 CFR 1.97 and 1.98.</p> <p>12. <input type="checkbox"/> An assignment document for recording. A separate cc "Express Mail" mailing number <u>EV 372403886US</u></p> <p>13. <input type="checkbox"/> A preliminary amendment. Date of Deposit <u>January 5 2005</u></p> <p>14. <input type="checkbox"/> An Application Data Sheet under 37 CFR 1.76. I hereby certify that this paper or fee is being deposited with the United States Postal Service "Express Mail to Addressee" service under 37 C.F.R. 1.10 on the date indicated above and is addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.</p> <p>15. <input type="checkbox"/> A substitute specification. Stacie H. Boswell</p> <p>16. <input type="checkbox"/> A power of attorney and/or change of address letter. <u>Stacie H. Boswell</u></p> <p>17. <input checked="" type="checkbox"/> A computer-readable form of the sequence listing in accordance with PCT Rule 13ter.2 and 37 CFR 1.821- 1.825.</p> <p>18. <input type="checkbox"/> A second copy of the published International Application under 35 U.S.C. 154(d)(4).</p> <p>19. <input type="checkbox"/> A second copy of the English language translation of the international application under 35 U.S.C. 154(d)(4).</p> <p>20. <input checked="" type="checkbox"/> Other items or information: <b>Statement Regarding Identity of Copies of Sequence Listing</b></p>		

This collection of information is required by 37 CFR 1.414 and 1.491-1.492. The information is required to obtain or retain a benefit by the public, which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 15 minutes to complete, including gathering information, preparing, and submitting the completed form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Mail Stop PCT, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

U.S. APPLICATION NO. (if known, see 37 CFR 1.5) <div style="font-size: 24pt; font-weight: bold; text-align: center;">10/520341</div>		INTERNATIONAL APPLICATION NO. <div style="font-size: 18pt; font-weight: bold; text-align: center;">PCT/US03/21094</div>		ATTORNEY'S DOCKET NUMBER <div style="font-size: 18pt; font-weight: bold; text-align: center;">421/67 PCT/US</div>											
21. The following fees are submitted: <input checked="" type="checkbox"/> a) Basic national fee..... \$300.00 <input checked="" type="checkbox"/> b) Examination fee..... \$200.00 <input checked="" type="checkbox"/> c) Search fee..... \$500.00 <div style="text-align: right; font-weight: bold;">TOTAL OF ABOVE CALCULATIONS = \$1000.00</div>				<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th style="width:50%;">Applicant use</th> <th style="width:50%;">Office use only</th> </tr> <tr> <td>\$ 300.00</td> <td></td> </tr> <tr> <td>\$ 200.00</td> <td></td> </tr> <tr> <td>\$ 500.00</td> <td></td> </tr> <tr> <td>\$ 1,000.00</td> <td></td> </tr> </table>		Applicant use	Office use only	\$ 300.00		\$ 200.00		\$ 500.00		\$ 1,000.00	
Applicant use	Office use only														
\$ 300.00															
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<input type="checkbox"/> Additional fee for specification and drawings filed in paper over 100 sheets (excluding sequence listing or computer program listing filed in an electronic medium). The fee is \$250 for each additional 50 sheets of paper or fraction thereof.															
Total Sheets	Extra sheets	Number of each additional 50 or fraction thereof (round up to a whole number)	RATE												
0 - 100 =	-100 /50 =		x \$250.00												
Surcharge of \$130.00 for furnishing the oath or declaration later than 30 months from the earliest claimed priority date (37 CFR 1.492(e)).				<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%;">\$</td> <td style="width:50%;">0.00</td> </tr> </table>		\$	0.00								
\$	0.00														
CLAIMS		NUMBER FILED	NUMBER EXTRA	RATE											
Total claims		60 - 20 =	40	x \$50.00	\$ 2,000.00										
Independent claims		9 - 3 =	6	x \$200.00	\$ 1,200.00										
				+ \$360.00	\$ 0.00										
MULTIPLE DEPENDENT CLAIM(S) (if applicable)					TOTAL OF ABOVE CALCULATIONS = \$ 4,200.00										
<input checked="" type="checkbox"/> Applicant claims small entity status. See 37 CFR 1.27. The fees indicated above are reduced by 1/2.					SUBTOTAL = \$ 2,100.00										
Processing fee of \$130.00 for furnishing the English translation later than 30 months from the earliest claimed priority date (37 CFR 1.492(f)).					\$ 0.00										
TOTAL NATIONAL FEE =					\$ 2,100.00										
Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31). \$40.00 per property					\$ 0.00										
TOTAL FEES ENCLOSED =					\$ 2,100.00										
Amount to be refunded:					<div style="background-color: #cccccc; width: 100px; height: 40px;"></div>										
Amount to be charged					<div style="background-color: #cccccc; width: 100px; height: 40px;"></div>										
<p>a. <input type="checkbox"/> A check in the amount of \$ _____ to cover the above fees is enclosed.</p> <p>b. <input checked="" type="checkbox"/> Please charge my Deposit Account No. <u>50-0426</u> in the amount of \$ <u>2,100.00</u> to cover the above fees. A duplicate copy of this sheet is enclosed.</p> <p>c. <input checked="" type="checkbox"/> The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. <u>50-0426</u>. A duplicate copy of this sheet is enclosed.</p> <p>d. <input type="checkbox"/> Fees are to be charged to a credit card. <b>WARNING:</b> Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.</p> <p><b>NOTE:</b> Where an appropriate time limit under 37 CFR 1.495 has not been met, a petition to revive (37 CFR 1.137(a) or (b)) must be filed and granted to restore the International Application to pending status.</p> <p>SEND ALL CORRESPONDENCE TO:          Arles A. Taylor, Jr.          Jenkins, Wilson &amp; Taylor, P.A.          Suite 1400 University Tower          3100 Tower Boulevard          Durham, NC 27707          UNITED STATES OF AMERICA</p> <div style="text-align: right; margin-top: 20px;"> <div style="font-family: cursive; font-size: 24pt; margin-bottom: 5px;">Arles A. Taylor, Jr.</div> <div style="border-top: 1px solid black; width: 150px; margin-bottom: 5px;"></div> <div style="font-size: 10pt; margin-bottom: 5px;">SIGNATURE</div> <div style="border-top: 1px solid black; width: 150px; margin-bottom: 5px;"></div> <div style="font-size: 10pt; margin-bottom: 5px;">NAME</div> <div style="border-top: 1px solid black; width: 150px; margin-bottom: 5px;"></div> <div style="font-size: 10pt; margin-bottom: 5px;">39,395</div> <div style="border-top: 1px solid black; width: 150px; margin-bottom: 5px;"></div> <div style="font-size: 10pt; margin-bottom: 5px;">REGISTRATION NUMBER</div> </div>															